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SARS-CoV-2 (COVID-19) ORF8 Antibody

Infectious Disease, COVID-19
Catalog # ASC12224

Specification

SARS-CoV-2 (COVID-19) ORF8 Antibody - Product Information

Application	**WB, E**
Primary Accession	P0DTC8
Other Accession	P0DTC8
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**WB: 1 µg/mL** **Antibody validated: SARS-CoV-2 (COVID-19) ORF8 antibody can detect 2 ng of free peptide at 1 µg/mL in ELISA. It can detect SARS-CoV-2 ORF8 recombinant protein by WB. All other applications and species not yet tested.**

SARS-CoV-2 (COVID-19) ORF8 Antibody - Additional Information

Gene ID	**43740577**

Other Names
ORF8 protein, ns8, ORF8, Non-structural protein 8

Target/Specificity
ORF8 Antibody is predicted to not cross-react with other coronavirus family members.

Reconstitution & Storage
SARS-CoV-2 (COVID-19) ORF8 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
SARS-CoV-2 (COVID-19) ORF8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SARS-CoV-2 (COVID-19) ORF8 Antibody - Protein Information

Name 8

Function
Plays a role in modulating the host immune response (PubMed:31986261, PubMed:35343786, PubMed:36689483). May act as a secreted virokine by mimicking interleukin-17A (IL17A), and thereby binding to the IL17RA

receptor, leading to activation of the IL17 pathway and increased secretion of pro-inflammatory factors (PubMed:35343786, PubMed:36689483). Contributes to the cytokine storm during SARS-CoV-2 infection when secreted by unconventional pathway (PubMed:33723527, PubMed:36689483). May act by down-regulating major histocompability complex class I (MHC-I) at cell surface (PubMed:34021074, PubMed:35157849). May inhibit expression of some members of the IFN-stimulated gene (ISG) family including hosts IGF2BP1/ZBP1, MX1 and MX2, and DHX58 (PubMed:34177923).

Cellular Location
Secreted. Note=Is secreted during a normal viral infection by unconventional pathway (PubMed:35157849, PubMed:36689483) Its mRNA is expressed in cytoplasm and not spliced during a viral infection, but is spliced when expressed from cDNA in nucleus (PubMed:35157849). Splicing changes localization to host endosome and/or cytoplasm (PubMed:33060197, PubMed:34177923). May also localize in nucleus when fused with GFP (PubMed:34177923)

SARS-CoV-2 (COVID-19) ORF8 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SARS-CoV-2 (COVID-19) ORF8 Antibody - Images

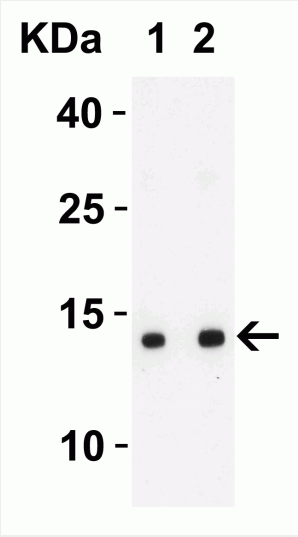

Figure 1 Western Blot Validation with SARS-CoV-2 (COVID-19) ORF8 Protein

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Loading: 30 ng per lane of SARS-CoV-2 (COVID-19) ORF8 recombinant protein (10-436). Antibodies: SARS-CoV-2 (COVID-19) ORF8, 9289, 1h incubation at RT in 5% NFDM/TBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution. Lane 1: 1 µg/mL and Lane 2: 2 µg/mL

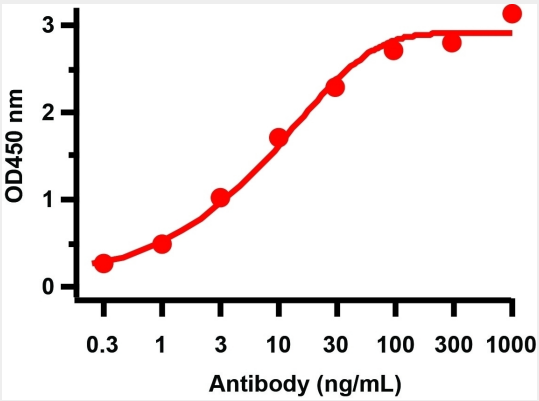

Figure 2 ELISA Validation
Antibodies: SARS-CoV-2 (COVID-19) ORF8 Antibody, 9289. A direct ELISA was performed using SARS-CoV-2 ORF8 immunogen peptide (9289P)) as coating antigen and the anti-SARS-CoV-2 (COVID-19) ORF8 antibody as the capture antibody. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:20000 dilution. Detection range is from 0.3 ng/mL to 1000 ng/mL

SARS-CoV-2 (COVID-19) ORF8 Antibody - Background

Coronavirus disease 2019 (COVID-19), formerly known as 2019-nCoV acute respiratory disease, is an infectious disease caused by SARS-CoV-2, a virus closely related to the SARS virus (1). The disease is the cause of the 2019–20 coronavirus outbreak (2). SARS-CoV-2 virus proteins include structural proteins, non-structural proteins and accessory factors. The structure of SARS-CoV-2 consists of the following: a spike protein (S), hemagglutinin-esterease dimer (HE), a membrane glycoprotein (M), an envelope protein (E) a nucleoclapid protein (N) and RNA. SARS-CoV-2 non-structural protein is ORF1ab that consists of 16 proteins (nsp1-nsp16), while accessory factors include ORF3a, ORF3b, ORF6, ORF7a, ORF7b, ORF8, ORF9b, ORF9c and ORF10.
ORF8 may play a role in modulating host immune response (Probable). May play a role in blocking host IL17 cytokine by its interaction with host IL17RA (3).

SARS-CoV-2 (COVID-19) ORF8 Antibody - References

Gorbalenya. bioRxiv: 2020.;Hui et al. Int J Infect Dis. 2020;91:264-266.;Chan et al. Lancet. 2020; 395:514-523.